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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/450,185	11/29/1999	D. RENE RASMUSSEN	103059	7277

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EXAMINER

CARTER, TIA A

ART UNIT

PAPER NUMBER

2622

DATE MAILED: 03/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/450,185

Applicant(s)

D. RENE RASMUSSEN ET AL

Examiner

Tia A Carter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 11-13 and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Banker et al. (US. 6275600).

Regarding claim [1], Banker et al. discloses an image quality analysis system for an image output device (fig. 6, col. 1, lines 40-51), comprising:

A test pattern pertinent to image quality determination (fig. 1, col. 2, lines 33-40);

A scanner that scans a hardcopy test image, which has been generated by the output device based on the test pattern, to form a digital raster image (fig. 1, col. 2, lines 42-50 and lines 60-61); and

An image quality analysis module that receives the digital raster image, distinguishes one or more test targets from the digital raster image, and performs image quality analysis on the test targets to obtain results quantifying image quality (fig. 1, col. 2, lines 60-67; fig. 2, col. 3, lines 1-45).

Regarding claim [2], Banker et al. discloses the image quality analysis system of claim 1, wherein the image quality analysis is performed based on human visual system models (Fig. 3A, col. 5, lines 29-31).

Regarding claim [3], Banker et al. discloses the image quality analysis system of claim 1, wherein the image quality analysis module resides locally at a site of the image output device (Fig. 1, col. 2, lines 42-50). The image quality analysis module is similar in nature to the print image analyzer (ref. #22).

Regarding claim [4], Banker et al. discloses the image quality analysis system of claim 3, wherein the image output device is a copier that contains the scanner (fig. 1, col. 2, lines 41-50).

Regarding claim [5], Banker et al. discloses the image quality analysis system of claim 1, wherein the scanner and the image quality analysis module reside remote from the image output device (fig. 1, col. 2, lines 43-47).

Regarding claim [6], Banker et al. discloses the image quality analysis system of claim 1, wherein the test pattern is stored in memory at the image output device (Fig. 1, col. 2, lines 60-67).

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Regarding claim [7], Banker et al. discloses the image quality analysis system of claim 1, wherein the image output device is a copier having an input scanner section serving as the scanner and an output printer section, and test pattern is in the form of a hardcopy printout that is subsequently scanned into the input scanner section and outputs as the hardcopy test image Fig. 1, col. 2, lines 42-59).

Regarding claim [11], Banker et al. discloses the image quality analysis system of claim 1, wherein the image quality results are independent of the particular image output device or scanner used, such that comparisons of results can be made between differing image output devices (fig. 3A, col. 5, lines 13-30).

Regarding claim [12], Banker et al. discloses a method of performing image quality analysis system on an image output device having an output station that generates a hardcopy image from a digital image (fig. 6, col. 1, lines 40-51), the method comprising:

Generating a hardcopy image output from the image output device based on a predetermined test pattern (fig. 1, col. 2, lines 33-47);

Scanning the hardcopy image using a scanner to form a digital raster image (fig. 1, col. 2, lines 42-50 and lines 60-61); and

Identifying test targets within the digital raster image using pattern recognition software (fig. 3A, col. 5, lines 13-21);

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performs image quality analysis on the test targets (fig. 1, col. 2, lines 60-67; fig. 2, col. 3, lines 1-45).

Regarding claim [13], Banker et al. discloses the method of claim 12, wherein the image quality analysis is based on human visual system (HVS) models and the image quality analysis provides results indicative of image quality that reflect human perceptions of image quality (fig. 3A, col. 5, lines 25-31)

Regarding claim [17], Banker et al. discloses the method of claim 16, further comprising the steps of analyzing the results along with predetermined image output device operating parameters and communicating information to the image output device relevant to correcting the undesirable image quality (fig. 3A, col. 5, lines 13-31).

Regarding claim [18], Banker et al. discloses the method of claim 12, wherein the image output device is a copier that contains a scanner (fig. 1, col. 2, lines 41-50).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8, 10, 14-16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banker et al. in view of Jenkins et al. (US. 5365310).

Regarding claim [8], Banker et al. discloses the image quality analysis system of claim 1.

Banker et al. **do not disclose** further comprising a communication module that connects the image quality analysis module to remote facility.

Jenkins et al. **disclose** further comprising a communication module that connects the image quality analysis module to remote facility (fig. 6, col. 7, lines 56-68; col. 8, lines 1-2).

It would have been obvious to one skilled in the art at the time of the invention to modify Banker et al. wherein the current system of Banker et al. has a remote device analyzing and correcting specific image data. This feature helps to prevent data overflow and to address defects that occur and to continue the normal process of the system.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to combine Jenkins et al. with Banker et al. to achieve the limitations set forth in claim 8.

Regarding claim [9], Banker et al. discloses the image quality analysis system of claim 8.

Banker et al. **do not disclose** wherein the results of the image quality analysis are forwarded to the remote facility through the communication module.

Jenkins et al. **disclose** wherein the results of the image quality analysis are forwarded to the remote facility through the communication module (fig. 6, col. 7, lines 56-68; col. 8, lines 1-16).

It would have been obvious to one skilled in the art at the time of the invention to modify Banker et al. wherein the current system of Banker et al. has a remote device analyzing and correcting specific image data. This feature helps to prevent data overflow and to address defects that occur and to continue the normal process of the system.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to combine Jenkins et al. with Banker et al. to achieve the limitations set forth in claim 9.

Regarding claim [10], banker et al. discloses the image quality analysis system of claim 9.

Banker et al. **do not disclose** wherein he remote facility includes a diagnostic module that returns information pertinent to correcting any undesirable image quality test results.

Jenkins et al. **disclose** wherein he remote facility includes a diagnostic module that returns information pertinent to correcting any undesirable image quality test results (fig. 2, col. 5, lines 33-53).

It would have been obvious to one skilled in the art at the time of the invention to modify Banker et al. wherein the current system of Banker et al. has a remote device analyzing and correcting specific image data. This feature helps to prevent data overflow and to address defects that occur and to continue the normal process of the system.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to combine Jenkins et al. with Banker et al. to achieve the limitations set forth in claim 10.

Regarding claim [14], Banker et al. disclose the method of claim 12.

Banker et al. **do not disclose** further comprising a step of sending a communication to service facility.

Jenkins et al. **disclose** further comprising a step of sending a communication to service facility (figs. 4 & 6, col. 7, lines 24-55).

It would have been obvious to one skilled in the art at the time of the invention to modify Banker et al. wherein the current system of Banker et al. has a remote device analyzing and correcting specific image data. This feature helps to prevent data overflow and to address defects that occur and to continue the normal process of the system.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to combine Jenkins et al. with Banker et al. to achieve the limitations set forth in claim 14.

Regarding claim [15], banker et al. disclose the method of claim 14.

Banker et al. **do not disclose** wherein the communication is a service call if the image quality results are less than desirable.

Jenkins et al. **disclose** wherein the communication is a service call if the image quality results are less than desirable (figs. 4 & 6, col. 7, lines 24-55).

It would have been obvious to one skilled in the art at the time of the invention to modify Banker et al. wherein the current system of Banker et al. has a remote device analyzing and correcting specific image data. This feature helps to prevent data overflow and to address defects that occur and to continue the normal process of the system.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to combine Jenkins et al. with Banker et al. to achieve the limitations set forth in claim 15.

Regarding claim [16], Banker et al. disclose the method of claim 14.

Banker et al. **do not disclose** wherein the communication is the transfer of the image quality results to the service facility.

Jenkins et al. **disclose** wherein the communication is the transfer of the image quality results to the service facility (fig. 6, col. 7, lines 56-68; col. 8, lines 1-16).

It would have been obvious to one skilled in the art at the time of the invention to modify Banker et al. wherein the current system of Banker et al. has a remote device analyzing and correcting specific image data. This feature helps to prevent data overflow and to address defects that occur and to continue the normal process of the system.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to combine Jenkins et al. with Banker et al. to achieve the limitations set forth in claim 16.

Regarding claim [20], Banker et al. disclose the method claim 12.

Banker et al. **do not disclose** wherein the steps of scanning and analyzing are performed remote from the image output device.

Jenkins et al. **disclose** wherein the steps of scanning and analyzing are performed remote from the image output device (fig.6, col. 7, lines 56-68; col. 8, lines 1-2).

It would have been obvious to one skilled in the art at the time of the invention to modify Banker et al. wherein the current system of Banker et al. has a remote device analyzing and correcting specific image data. This feature helps to prevent data overflow and to address defects that occur and to continue the normal process of the system.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to combine Jenkins et al. with Banker et al. to achieve the limitations set forth in claim 20.

Claim Objections

5. Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chao (US. 6404517), Bowden (US. 6052809), Rolleston et al. (US. 5416613), Williams et al. (US. 5642202), Falk (US. 5760913), Haikin et al. (US. 6512845) are cited to show related art with respect to test pattern generation for printing systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tia A Carter whose telephone number is 703 - 306-5433. The examiner can normally be reached on M-F (9:30-6:00).

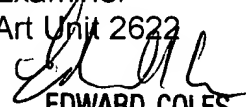
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L Coles can be reached on 703-305-4712. The fax phone numbers

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for the organization where this application or proceeding is assigned are 703-746-6036 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-6056.

TAC
March 20, 2003

Tia A Carter
Examiner
Art Unit 2622

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